

This listing of claims will replace all prior versions, and listings, of claims in the application.

IN THE CLAIMS:

1 1. (currently amended) A method of producing a capillary optic produced
2 by impression comprising the steps of:
3 providing a mold having an external profile figured for reflective radiation
4 transmission along an axis;
5 providing at least one soft plate having a surface for reflective radiation
6 transmission,
7 impressing the mold into the soft plate;
8 removing the mold from the soft plate to leave a vacant impression figured for
9 reflective radiation transmission in the soft plate along the axis, and
10 enclosing the vacant impression to provide for a vacant impression for reflective
11 radiation transmission along the axis of the vacant impression.

1 2. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 and wherein:
3 the enclosing step includes:
4 etching the mold out of ~~a~~ the soft plate.

1 3. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 wherein:
3 two soft plates are used on either side of the mold.

1 4. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 and wherein:
3 the enclosing step includes placing a cover plate is over the vacant impression.

4 1 5. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 the mold is a wire.

1 6. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 5 and wherein:
3 the wire is produced by an differential etching process.

1 7. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 providing two plates of identical materials; and,
4 the impressing step provides symmetrical imprints on the two plates.

1 8. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 providing two plates of different materials; and
4 the impressing step provides asymmetrical imprints.

1 9. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 the impressing step includes the use of rollers.

1 10. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 the mold having an external profile figured for radiation transmission is a
4 paraboloid.

1 11. (currently amended) The method of producing a capillary optic ~~produced~~
2 by impression according to claim 1 and wherein:
3 the mold having an external profile figured for radiation transmission is an
4 ellipsoid.

12. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 and including the additional step of placing a reflection
enhancing film on the vacant impression before enclosing the optic.

13. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 wherein the reflection enhancing film is a multi-layer
coating.

14. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~
communicating the enclosed vacant impression with an x-ray tube to provide for
reflective radiation transmission along the axis of the vacant impression.

15. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~
communicating the enclosed vacant impression with synchrotron radiation to
provide for reflective radiation transmission along the axis of the vacant impression.

16. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~
communicating the enclosed vacant impression with an electron microprobe
instrument to provide for reflective radiation transmission along the axis of the vacant
impression.

17. (currently amended) The method of producing a capillary optic produced
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~
communicating the enclosed vacant impression with light chosen from the group
including visible, ultraviolet, or infrared light to provide for reflective radiation transmission
along the axis of the vacant impression.

1 18. (currently amended) The method of producing a capillary optic produced
2 by impression according to claim 17 wherein the light originates to the vacant impression from
3 optical fibers.

1 19. (currently amended) The method of producing a capillary optic produced
2 by impression according to claim 17 wherein the light originates from lasers.

1 20. (currently amended) The method of producing a capillary optic produced
2 by impression according to claim 1 wherein the mold includes more than one wire.

1 21. (currently amended) An optical connector including:
2 at least one soft plate having a surface for reflective radiation transmission,
3 ~~an a vacant~~ impression into the soft plate having an external profile figured for
4 reflective radiation transmission along an axis; and,
5 an enclosure over the vacant impression to provide for radiation transmission
6 along the axis of the vacant impression.

1 22. (currently amended) A process of connecting optical fibers comprising
2 the steps of:
3 providing at least one soft plate having a surface for reflective radiation
4 transmission;
5 placing ~~an a vacant~~ impression into the soft plate having an external profile
6 figured for reflective radiation transmission along an axis;
7 placing at least one optical fiber having an end to emit radiation into the ~~external~~
8 vacant profile impression; and,
9 enclosing the ~~optical fiber and~~ external profile to permit radiation to travel
10 between the optical fiber and the vacant impression.

1 23. (currently amended) The process of connecting optical fibers according
2 to claim 2022 and wherein:
3 placing at least two optical fibers having ends to emit radiation into the external
4 profile from opposite ends of the external profile.

1 24. (currently amended) The process of connecting optical fibers according
2 to claim 22 and wherein:

3 more than one vacant impression is placed into the soft plate having an external
4 profile figured for radiation transmission along an axis.

1 25. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 wherein ~~the~~ an optical coating is placed before the ~~pressing~~
3 impressing step.

1 26. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 wherein:
3 the plate has curvature.

1 27. (currently amended) The method of producing a capillary optic-produced
2 by impression according to claim 1 wherein:
3 the plate includes a groove to position the mold.
